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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,148	07/07/2003	Peter Willaert	223468	7705

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EXAMINER

THOMPSON, CAMIE S

ART UNIT PAPER NUMBER

1774

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,148

Applicant(s)

WILLAERT ET AL.

Examiner

Camie S. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amdnement filed August 14, 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15, 17, 20-29 and 32-35 is/are pending in the application:
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14, 22-29, 32-35 is/are allowed.
- 6) ☒ Claim(s) 15, 17, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed August 14, 2006 are acknowledged.
2. Examiner acknowledges amended claims 17, 20, 21 and 24.
3. Examiner acknowledges cancelled claims 16, 18-19 and 30-31.
4. Examiner acknowledges newly added claims 32-35.
5. The rejection of claims 16, 18-19 and 30-31 under 35 U.S.C. 102(b) as being anticipated by Van Haare et al., U.S. Patent Number 5,994,496 is overcome by applicant's amendment.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 15, 17, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Haare et al., U.S. Patent Number 5,994,496.

Van Haare discloses layers of conjugated polymers that may be used as a transparent coating on a display device or as an electrode layer in an electroluminescent device (see column 1, lines 5-12). The reference discloses 3,4-di(2-methylbutoxy)-2,5-thiophene as a preferred polymer (see column 3, lines 22-31). Column 5, lines 27-37 of the Van Haare reference discloses that at least one electrode (which can include both electrodes) has a transparent coating using a preferred polythiophene such as 3,4-di(2-methylbutoxy)-2,5-thiophene solution. Exemplary embodiment

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4 discloses a 3,4-dialkoxythiophene wherein the two alkoxy groups are represented by OR¹ and OR² wherein R¹ and R² are C1-C4 alkyl (butoxy) with a methyl group as a substituent on the alkyl chain. Although the

Claims 8-14, 22-29 and 32-35 are allowed. The prior art does not provide for a process for producing an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (I) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor, (iii) coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer with a solution, dispersion or paste comprising a polymer or copolymer of 3,4-dialkoxythiophene to produce said second conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3, 4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv).

Additionally, the prior art does not provide for a process comprising the steps of: using a transparent paste comprising a polymer or copolymer of a 3,4-dialkoxythiophene, a polyacrylate

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thickener and a glycol derivative, and optionally a surfactant for producing an electrode of an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and said second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of a 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy-bridge.

The prior art does not provide for a process for producing an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (I) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor, (iii) coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer with a solution, dispersion or paste comprising a polymer or copolymer of 3,4-dialkoxythiophene to produce said second conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution,

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dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3, 4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv) and wherein said electroluminescent phosphor belongs to the class of II-IV semiconductors or is a combination of a group II element with an oxidic anion.

The prior art does not provide for a process for producing an electroluminescent device comprising a transparent or translucent support, a transparent or translucent first electrode, a second conductive electrode and an electroluminescent phosphor layer sandwiched between said transparent or translucent first electrode and second conductive electrode, wherein said first and second electrodes each comprises a polymer or copolymer of 3,4-dialkoxythiophene, which may be the same or different, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, comprising the steps of: (I) coating a transparent or translucent support with a solution, a dispersion or a paste of a polymer or copolymer of a 3,4-dialkoxythiophene to produce said transparent or translucent first conductive layer; (ii) coating said first conductive layer with a layer comprising an electroluminescent phosphor, (iii) coating said layer comprising an electroluminescent phosphor with a dielectric layer; and (iv) coating said dielectric layer with a solution, dispersion or paste comprising a polymer or copolymer of 3,4-dialkoxythiophene to produce said second conductive layer, wherein said polymer or copolymer of said 3,4-dialkoxythiophene in the solution, dispersion or paste used in step (i) may be the same or different from said polymer or copolymer of said 3, 4-dialkoxythiophene used in the solution, dispersion or paste used in step (iv) and wherein at least one of said two electrodes further comprises a polyanion compound.


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Response to Arguments

8. Applicant's arguments filed August 14, 2006 have been fully considered but they are not persuasive. As amended in instant claims 17, 20 and 21, it is not necessary for the dielectric layer to be present. Also, claim 17 recites that OR¹ and OR² wherein R¹ and R² represents a C1-C4 alkyl group. The reference discloses that R¹ and R² are butoxy with a methyl group as a substituent on the alkyl chain. Also, claim 15 is directed to a process and not to the illuminated posters and signage.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER

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10/13/06